

137522-1

IN THE CLAIMS:

1. (Previously Presented) A method of recycling polycarbonate resin waste, comprising

subjecting a polycarbonate waste component to one or both of a transesterification reaction and a polycondensation reaction, wherein the polycarbonate waste component has an OH group concentration and comprises polycarbonate resin waste; and

adjusting the OH group concentration of the polycarbonate waste component, wherein the OH group concentration is adjusted before being subjected to either of the transesterification reaction or the polycondensation reaction.

2. (Cancelled)

3. (Previously Presented) The recycling method of Claim 1, wherein the polycarbonate waste component further comprises polycarbonate oligomer.

4. (Previously Presented) A method of recycling polycarbonate resin waste, comprising

subjecting a polycarbonate waste component to one or both of a transesterification reaction and a polycondensation reaction, wherein the polycarbonate waste component has an OH group concentration and comprises polycarbonate resin waste; and

adjusting the OH group concentration of the polycarbonate waste component, wherein the OH group concentration is adjusted during the transesterification reaction.

5. (Cancelled)

6. (Original) The recycling method of Claim 1, wherein the OH group concentration is a terminal OH group concentration.

7. (Original) The recycling method of Claim 1, further comprising introducing the polycarbonate waste component and a material to a prepolymerization tank, wherein the material is selected from the group consisting of a dihydroxy compound, a carbonate diester, reaction

137522-1

products of a dihydroxy compound and a carbonate diester, and combinations comprising at least one of the foregoing materials.

8. (Original) The recycling method of Claim 1, wherein the polycarbonate waste component comprises an aromatic polycarbonate comprising bisphenol-A.

9. (Original) The recycling method of Claim 1, wherein adjusting the OH group concentration comprises adding a terminal regulator during one or both of the transesterification and polycondensation reactions.

10. (Original) The recycling method of Claim 9, wherein the terminal regulator comprises an aromatic dihydroxy compound.

11. (Original) The recycling method of Claim 10, wherein the aromatic dihydroxy compound comprises bisphenol-A.

12. (Original) The recycling method of Claim 1, wherein the OH concentration is about 200 to about 25,000 ppm per unit weight of the polycarbonate waste component.

13. (Original) The recycling method of Claim 12, wherein the OH concentration is about 500 to about 20,000 ppm per unit weight of the polycarbonate waste component.

14. (Original) The recycling method of Claim 13, wherein the OH concentration is about 500 to about 10,000 ppm per unit weight of the polycarbonate waste component.

15. (Original) The recycling method of Claim 1, which results in a polycarbonate product having an intrinsic viscosity of 0.1 to 1.0 dl/g.

16. (Original) A method of recycling polycarbonate resin waste, comprising:  
introducing a dihydroxy compound and a carbonate diester to a mixing tank to form a mixing tank composition;  
directing the mixing tank composition to a prepolymerization tank to form a

137522-1

prepolymerization composition;

melting a polycarbonate waste component, wherein the polycarbonate waste component has an OH group concentration and comprises polycarbonate resin waste;

combining the prepolymerization composition with the melted polycarbonate waste component to form a combination;

adjusting the OH group concentration of the polycarbonate waste component;

polymerizing the combination to form a polycarbonate product; and

extruding the polycarbonate product.

17. (Original) The recycling method of Claim 16, wherein the OH group concentration is adjusted before polymerizing the combination.

18. (Original) The recycling method of Claim 16, wherein the OH group concentration is adjusted before combining the prepolymerization composition with the melted polycarbonate waste component.

19. (Original) The recycling method of Claim 16, wherein the polycarbonate waste component further comprises polycarbonate oligomer.

20. (Original) The recycling method of Claim 16, comprising adjusting the OH group concentration while polymerizing the combination.

21. (Original) The recycling method of Claim 20, wherein adjusting the OH group concentration further comprises adding a terminal regulator.

22. (Original) The recycling method of Claim 20, wherein the terminal regulator comprises an aromatic dihydroxy compound.

23. (Original) The recycling method of Claim 21, wherein the aromatic dihydroxy compound comprises bisphenol-A.

137522-1

24. (Original) The recycling method of Claim 16, wherein the OH concentration of the is about 200 to about 25,000 ppm per unit weight of the polycarbonate waste component.

25. (Original) The recycling method of Claim 24, wherein the OH concentration is about 500 to about 20,000 ppm per unit weight of the polycarbonate waste component.

26. (Original) The recycling method of Claim 25, wherein the OH concentration wherein the OH concentration is about 500 to about 10,000 ppm per unit weight of the polycarbonate waste component.

27. (Original) The recycling method of Claim 16, wherein adjusting the OH group concentration comprises controlling the amount of polycarbonate waste component combined with the prepolymerization composition.